

IN THE CLAIMS:

The text of all pending claims is set forth below. Cancelled claims are indicated with claim number and status only. The claims are listed below for the convenience of the Examiner. No amendments are being made. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (PREVIOUSLY PRESENTED) An image display control unit which displays an original image on a display screen, said control unit comprising:

a screen size information obtaining section obtaining information on a display size on the whole of said display screen;

an image information obtaining section obtaining information on vertical and horizontal sizes of said image;

an arithmetic section calculating an image magnification ratio so that at least one of said vertical and horizontal sizes of said image substantially conforms with at least one of vertical and horizontal display sizes on the whole of said display screen;

a first storing section which stores therein (i) the image magnification ratio calculated by said arithmetic section, (ii) display position information, which is the location of a part of the original image, which part is shown on the display screen, in the original image and (iii) the original image, in association with one another; and

a display control section confirming whether said part of the original image is stored in said first storing section when said part of the original image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated by said arithmetic section, on said display screen, and obtaining, if the confirming is positive, the display position information from said first storing section and displaying the part of the original image located at the location indicated by the display position information at the image magnification ratio on said display screen.

2. (ORIGINAL) An image display control unit according to claim 1, wherein said arithmetic section calculates image magnification ratios for when said vertical size of said image is set to substantially conform with said vertical display size of said display screen and for when said horizontal size of said image is set to substantially conform with said horizontal display size of said display screen, and selects the larger one of the calculated vertical and horizontal magnification ratios and outputs the selected magnification ratio to said display control section.

3. (PREVIOUSLY PRESENTED) An image display control unit which displays an original image on a display screen, said control unit comprising:

- a character size detecting section obtaining a character size used most frequently in said image;
- an arithmetic section calculating a magnification ratio of said image on the basis of the character size so that said character in said image is displayed at a predetermined size on said display screen;
- a first storing section which stores therein (i) the image magnification ratio calculated by said arithmetic section, (ii) display position information, which is the location of a part of the original image, which part is shown on the display screen, in the original image and (iii) the original image, in association with one another; and
- a display control section confirming whether said part of the original image is stored in said first storing section when said part of the original image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated by said arithmetic section, on said display screen, and obtaining, if the confirming is positive, the display position information from said first storing section and displaying the part of the original image located at the location indicated by the display position information at the image magnification ratio on said display screen.

4. (ORIGINAL) An image display control unit according to claim 3, wherein said predetermined size is height of said character.

5. (ORIGINAL) An image display control unit according to claim 3, wherein said predetermined size is the number of pixels for the character of height.

6. (ORIGINAL) An image display control unit according to claim 3, wherein said predetermined size is a field angle in a character height direction.

Claims 7-13 (CANCELED)

14. (PREVIOUSLY PRESENTED) An image display control unit according to claim 2, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

15. (PREVIOUSLY PRESENTED) An image display control unit according to claim 3, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

16. (PREVIOUSLY PRESENTED) An image display control unit according to claim 4, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

17. (PREVIOUSLY PRESENTED) An image display control unit according to claim 5, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

18. (PREVIOUSLY PRESENTED) An image display control unit according to claim 6, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

19. (PREVIOUSLY PRESENTED) An image display control unit according to claim 1, further comprising a second storing section associating display position information, on location of said image on the display screen, with said image and retaining the associated display position information.

Claims 20-24 (CANCELED)

25. (ORIGINAL) An image display control unit according to claim 13, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

26. (ORIGINAL) An image display control unit according to claim 14, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

27. (ORIGINAL) An image display control unit according to claim 15, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

28. (ORIGINAL) An image display control unit according to claim 16, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

29. (ORIGINAL) An image display control unit according to claim 17, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

30. (ORIGINAL) An image display control unit according to claim 18, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

31. (ORIGINAL) An image display control unit according to claim 19, wherein said second storing section associates a display magnification of said image, which is displayed on said display screen, with said image and stores the associated magnification ratio.

Claims 32-36 (CANCELED)

37. (PREVIOUSLY PRESENTED) An image display control unit according to claim 1, further comprising a scroll processing section scrolling said image on said display screen.

38. (PREVIOUSLY PRESENTED) An image display control unit according to claim 3, further comprising a scroll processing section scrolling said image on said display screen.

39. (ORIGINAL) An image display control unit according to claim 1, wherein an index image, which is produced by reducing an original image, is displayed as said image on said display screen as said image.

40. (ORIGINAL) An image display control unit according to claim 3, wherein an index image, which is produced by reducing an original image, is displayed as said image on said display screen as said image.

41. (PREVIOUSLY PRESENTED) An image display control unit according to claim 39, further comprising a third storing section associating position information, on location of an image to be displayed, with the original image and retaining the associated position information.

42. (PREVIOUSLY PRESENTED) An image display control unit according to claim 40, further comprising a third storing section associating position information, on location of an image to be displayed, with the original image and retaining the associated position information.

43. (PREVIOUSLY PRESENTED) An image display control method of displaying an image on a display screen for an image displaying apparatus, said control method comprising:

- obtaining information on a display size on the whole of said display screen;
- obtaining information on vertical and horizontal sizes of said image;
- calculating an image magnification ratio so that at least one of said vertical and horizontal sizes of said image substantially conforms with at least one of vertical and horizontal display sizes on the whole of said display screen;
- associating the image magnification ratio and display position information on a location of said image on the display screen with said image;
- retaining the image magnification ratio and the display position information on the location of said image on the display screen as associated with said image;
- confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen;
- displaying, if said confirming is negative, said image at the image magnification ratio on said display screen;
- obtaining, if said confirming is positive, the display position information; and
- displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

44. (ORIGINAL) An image display control method according to claim 43, wherein, in said arithmetic step, said image magnification ratio is calculated for when said vertical size of said image is set to substantially conform with said vertical display size of said display screen and for when said horizontal size of said image is set to substantially conform with said horizontal display size of said display screen, and the larger magnification ratio is selected from the calculated vertical and horizontal magnification ratios.

45. (PREVIOUSLY PRESENTED) An image display control method of displaying an image on a display screen, said control method comprising:

- obtaining a character size used most frequently in said image;
- calculating a magnification ratio of said image on the basis of the detected character size so that said character in said image is displayed at a predetermined size on said display screen;
- associating the magnification ratio and the display position information on a location of said image on the display screen with said image;
- retaining the magnification ratio and the display position information on the location of said image on the display screen as associated with said image;
- confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen;
- displaying, if said confirming is negative, said image at the magnification ratio on said display screen;
- obtaining, if said confirming is positive, the display position information; and
- displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

46. (PREVIOUSLY PRESENTED) An image displaying apparatus comprising:
a display screen for displaying an image;
a screen size information obtaining section for obtaining information on a display size on the whole of said display screen;
an image information obtaining section for obtaining information on vertical and horizontal sizes of said image;
an arithmetic section for calculating an image magnification ratio so that at least one of said vertical and horizontal sizes of said image substantially conforms with at least one of vertical and horizontal display sizes on the whole of said display screen;

a storing section associating the image magnification ratio calculated by said arithmetic section and display position information on a location of said image on the display screen with said image and retaining display information in which the image magnification ratio, the display position information and said image are associated; and

a display control section confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated by said arithmetic section, on the display screen, and obtaining, if the confirming is positive, the display position information from the first storing section and displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

47. (ORIGINAL) An image displaying apparatus according to claim 46, wherein said arithmetic section calculates said image magnification ratio for when said vertical size of said image is set to substantially conform with said vertical display size of said display screen and for when said horizontal size of said image is set to substantially conform with said horizontal display size of said display screen, and selects the larger one of the calculated vertical and horizontal magnification ratios and outputs the selected magnification ratio to said display control section.

48. (PREVIOUSLY PRESENTED) An image displaying apparatus comprising:
a display screen displaying an image;
a character size detecting section obtaining a character size used most frequently in said image;

an arithmetic section calculating an image magnification ratio of said image on the basis of the detected character size so that said character is displayed at a predetermined size on said display screen;

a storing section associating the image magnification ratio calculated by said arithmetic section and display position information on a location of said image on the display screen with said image and retaining display information in which the image magnification ratio, the display position information and said image are associated; and

a display control section confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated

by said arithmetic section, on said display screen, and obtaining, if the confirming is positive, the display position information from the first storing section and displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

49. (PREVIOUSLY PRESENTED) An image display control program recorded computer-readable recording medium which retains an image display control program for making a computer implement an image display control function to display an image on a display screen of an image displaying apparatus, said image display control program making the computer function as:

a screen size information obtaining section obtaining information on a display size on the whole of said display screen;

an image information obtaining section obtaining information on vertical and horizontal sizes of said image;

an arithmetic section calculating an image magnification ratio so that at least one of said vertical and horizontal sizes of said image substantially conforms with at least one of vertical and horizontal display sizes on the whole of said display screen;

a storing section associating the image magnification ratio calculated by said arithmetic section and display position information on a location of said image on the display screen with said image and retaining display information in which the image magnification ratio, the display position information and said image are associated; and

a display control section confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated by said arithmetic section, on said display screen, and obtaining, if the confirming is positive, the display position information from the first storing section and displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

50. (ORIGINAL) An image display control program recorded computer-readable recording medium according to claim 49, wherein said arithmetic section calculates said image magnification ratio for when said vertical size of said image is set to substantially conform generally with said vertical display size of said display screen and for when said horizontal size of said image is set to substantially conform with said horizontal display size of said display

screen, and to select the larger one of the calculated vertical and horizontal magnification ratios for outputting the selected magnification ratio to said display control section.

51. (PREVIOUSLY PRESENTED) An image display control program recorded computer-readable recording medium which retains an image display control program for making a computer implement an image display control function to display an image on a display screen of an image displaying apparatus, said recording medium making said computer function as:

a character size detecting section obtaining a character size used most frequently in said image;

an arithmetic section calculating an image magnification ratio of said image on the basis of the detected character size so that said character is displayed at a predetermined size on said display screen;

a storing section associating the image magnification ratio calculated by said arithmetic section and display position information on a location of said image on the display screen with said image and retaining display information in which the image magnification ratio, the display position information and said image are associated; and

a display control section confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen and displaying, if the confirming is negative, said image at the image magnification ratio, which has been calculated by said arithmetic section, on said display screen, and obtaining, if the confirming is positive, the display position information from the first storing section and displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

52. (PREVIOUSLY PRESENTED) An image display control method of displaying an image on a display screen for an image displaying apparatus, said control method comprising:

obtaining information on a display size on the whole of the display screen;

obtaining information on vertical and horizontal sizes of the image;

calculating an image magnification ratio so that at least one of the vertical and horizontal sizes of the image substantially conforms with at least one of vertical and horizontal display sizes on the whole of the display screen;

associating the magnification ratio and the display position information on a location of said image on the display screen with said image;

retaining the magnification ratio and the display position information on the location of said image on the display screen as associated with said image;

confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen;

displaying the image at the magnification ratio on said display screen;

obtaining, if said confirming is positive, the display position information; and

displaying said image at the location indicated by the display position information and at the image magnification ratio on said display screen.

53. (PREVIOUSLY PRESENTED) An image display control method of displaying an image on a display screen, comprising:

obtaining a character size used most frequently in the image;

calculating a magnification ratio of the image on the basis of the detected character size so that the character in the image is displayed at a predetermined size on the display screen;

associating the magnification ratio and the display position information on a location of said image on the display screen with said image;

retaining the magnification ratio and the display position information on the location of said image on the display screen as associated with said image;

confirming whether said image is stored in said first storing section when said image is to be displayed on said display screen;

displaying the image at the magnification ratio on said display screen;

obtaining, if said confirming is positive, the display position information; and

displaying said image at the location indicated by the display position information at the image magnification ratio on said display screen.